

## **REMARKS**

Applicants respectfully request entry of the Amendment and reconsideration of the claims. Claims 1-6 are currently pending. Claim 1 has been amended to add the treatment indication to the body of the claim. Support can be found throughout the specification, including at page 15, paragraph 86. No new matter has been entered as a result of the amendment. Applicants respectfully request reconsideration and withdrawal of the pending rejections under 35 U.S.C. § 103(a).

### **Interview Summary**

Applicants thank the Examiner for his time in discussing the pending claims during the recent interview at the U.S. Patent & Trademark Office on March 16, 2006. In attendance besides Examiner Jones were Dr. Albert Friesen and Dr. James Charlton of Medicure, Inc., and Dr. Ronald Daignault (Reg. No. 25,968). The Examiner and Dr. Friesen discussed pyridoxine's toxicity and ineffectiveness in treating cardiovascular related pathologies. In addition, the Examiner and Dr. Charlton discussed the difference between vitamin B<sub>6</sub> and vitamin B<sub>6</sub> derivatives in addition to clarifying the difference between therapeutically effective amounts of vitamin B<sub>6</sub> derivatives and nutritionally effective amounts to prevent vitamin deficiencies. This reply is drafted in keeping with the comments and discussion of the interview.

### **Rejection Under 35 U.S.C. §103(a)**

The Examiner rejects claims 1-6 under 35 U.S.C. § 103(a) for allegedly being obvious over pages 1354-1357 of Goodman & Gilman's The Pharmacological Basis of Therapeutics (9th Ed.) in view of U.S. Patent No. 2,904,551 (Pollack et al.) and also in view of U.S. Patent No. 6,051,587 (Dakashinamurti et al.), still in further view of Stryer (Biochemistry, 4th ed., 1995, p. 452-453). Specifically, the Examiner states

[O]ne having ordinary skill in the art would have found it obvious to include a multivitamin or a vitamin supplement of B<sub>6</sub> to maintain basic metabolism of a healthy individual, especially when vitamins, including B<sub>6</sub>, are not synthesized by a human and need to be taken as a supplement to a [sic] one's diet, even when a person is being treated with [sic] ailment such as reducing blood clots to obviate blockages thus causing infarcts. Office Action, Dec. 23, 2005 at p. 3.

Applicants respectfully traverse.

To establish a *prima facie* case of obviousness, three criteria must be met--a suggestion or motivation to combine references, a reasonable expectation of success, and the prior art reference teaches or suggests all the claim limitations. MPEP § 2143; *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). Administration of a therapeutically effective amount pyridoxine has been both toxic and ineffective in treating cardiovascular pathologies. Applicants respectfully assert that the Examiner has not sufficiently established a motivation to combine references or a reasonable expectation of success.

The Examiner contends that it is obvious to combine an antithrombolytic agent with a derivative of vitamin B<sub>6</sub> "because vitamins are essential to basic human metabolism and need to be supplemented into a person's diet." (Office Action, Dec. 23, 2005 at p. 3). A nutritionally effective amount of vitamin B<sub>6</sub> is distinct from the disclosed therapeutically effective amounts of pyridoxal-5'-phosphate and other vitamin B<sub>6</sub> derivatives used to treat the indications disclosed in the instant specification (See table at S-12, "Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B<sub>6</sub>, Folate, Vitamin B<sub>12</sub>, Pantothenic Acid, Biotin, and Choline"). Dosages of pyridoxine on the order of therapeutically effective amounts of claimed pyridoxine derivatives produce neurotoxicity (Schaumberg et al., 1983, *N. Eng. Med. J.*; Bässler, 1988, *Internat. J. Vit. Nutr. Res.*; Holman, 1995, *J. Austral. Coll. Nutr. Environ. Med.*). In view of pyridoxine's neurotoxicity, the art as a whole teaches away from administering pyridoxine at therapeutically effective amounts to reduce blood clots. "A reference may be said to teach away when a person of ordinary skill, upon [examining] the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994). Applicants respectfully assert that there is no motivation to combine the references in view of the art demonstrating neurotoxicity to arrive at the claimed subject matter. Additionally, all of the claim limitations have not been taught or suggested by the cited art in view of pyridoxine's neurotoxicity at therapeutically effective amounts.

Additionally, the indication in the instant claims, reducing blood clots, is not associated with a vitamin deficiency. Blood clots are the result of activation of coagulation sequences following a trigger (e.g., endothelial cell injury, release of tissue factor, etc.) and not due to a vitamin deficiency. None of the cited art recites or suggests that pyridoxine derivatives would

reduce blood clots. Thereby the Examiner has not established that the two compositions (an antithrombolytic agent and the claimed pyridoxine derivatives) are taught by the prior art to be useful for the same purpose. Applicants respectfully assert that the Examiner has not established a motivation to combine the cited art to arrive at the claimed subject matter or a reasonable expectation of success.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection under § 103(a).

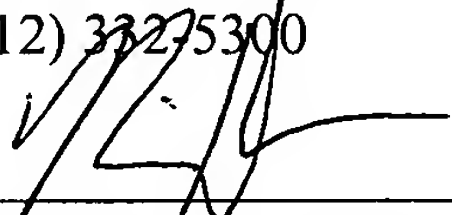
### Summary

In view of the above amendments and remarks, Applicants respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

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